

CLAIMS

1. A service providing system, including, at least, a plurality of electronic appliances, a service server, and a communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a moving body and being assigned a unique device ID, and

the service server having a function for providing a predetermined service and storing said unique device ID for each electronic appliance to which services can be provided,

the service providing system comprising

transmission means for using a device ID to provide access, via the communication network, from the service server to a specified electronic appliance to which a specified service needs be provided and transmitting service information, which has a predetermined content for realizing the specified service, to the specified electronic appliance.

2. A service providing system, including, at least, a plurality of electronic appliances, a service server, and a communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a moving body and being assigned a unique device ID, and

the service server having a function for providing a predetermined service and storing said unique device ID for each

electronic appliance to which services can be provided,

the service providing system comprising:

first transmission means for providing access, via said communication network, from an electronic appliance to a service server and transmitting information which has a predetermined content that can be used by a specified service from said electronic appliance to said service server; and

second transmission means for using said device ID to provide access, via said communication network, from said service server to a specified electronic appliance to which a specified service needs to be provided and transmitting service information, which has a predetermined content for realizing the specified service, to the accessed specified electronic appliance.

3. A service providing system, including, at least, a plurality of electronic appliances, a plurality of mobile communication terminal apparatuses, and a communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a moving body and being assigned a unique device ID, and

each mobile communication terminal apparatus being assigned a unique terminal ID,

the service providing system comprising:

transmission means for using said device ID to provide access, via said communication network, from one of said mobile communication terminal apparatuses to a specified electronic appliance, and transmitting service information, which includes a

predetermined content for realizing a specified service to be provided, to the specified electronic appliance.

4. A service providing system, including, at least, a plurality of electronic appliances, a plurality of mobile communication terminal apparatuses, and a communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a moving body and being assigned a unique device ID, and

each mobile communication terminal apparatus being assigned a unique terminal ID,

the service providing system comprising:

first transmission means for providing access, via the communication network, from an electronic appliance to one of the mobile communication terminal apparatuses and transmitting information, which has a predetermined content that can be used by a specified service, from said electronic appliance to said mobile communication terminal apparatus; and

second transmission means for using said device ID to provide access, via said communication network, from one of said mobile communication terminal apparatuses to a specified electronic appliance and transmitting service information, which has a predetermined content for realizing a specified service, to the accessed specified electronic appliance.

5. A service providing system, composed of an electronic appliance, a communication network, a communication terminal apparatus, and an

authentication server,

the electronic appliance being one of (i) an electronic appliance that is mounted in a moving body and is equipped with a mobile communication terminal function and (ii) a mobile communication terminal apparatus,

the communication terminal apparatus being set up with a fixed access path to the communication network, and

the authentication server being connected to said communication network,

the service providing system comprising:

access means that enables the communication terminal apparatus to access one of the electronic appliances via the communication network using a device ID that has been assigned uniquely to the electronic appliance, the communication terminal apparatus accessing the electronic appliance only through the authentication server;

terminal ID generating means, provided on said communication network, for generating a terminal ID for said communication terminal apparatus using information that identifies an access path by which said communication terminal apparatus accesses said communication network;

authentication process means, provided in said authentication server, for using said terminal ID to perform an authentication process for said communication terminal apparatus that has accessed the authentication server and allowing said communication terminal apparatus to access said electronic appliance only when the communication terminal apparatus has been authenticated; and

transmission/reception means for receiving and transmitting

service information, which has a predetermined content for realizing a specified service, between said communication terminal apparatus that has been authenticated by said authentication process means and said electronic appliance.

6. A communication system where data communication is performed between a plurality of communication appliances via a network, the communication system comprising:

a plurality of first electronic appliances, each of which is equipped with a wireless communication function and has a first device ID for identifying the first electronic appliance,

a wireless communication apparatus for connecting to said network and performing wireless communication that specifies one of the first electronic appliances using said first device ID; and

an authentication apparatus which is connected to said network and includes group information for each of a plurality of groups of said first electronic appliances to which unrestricted data communication can be performed, the group information of a group being associated with the first device IDs of the first electronic appliances in the group, the authentication apparatus judging whether unrestricted data communication can be performed, based on the first device ID of a first electronic appliance and the group information, and controlling the wireless communication apparatus.

7. A communication system in accordance with Claim 6, further comprising:

second electronic appliances, each of which has a communication

function and a unique second device ID; and

a communication apparatus for communicating with one of said second electronic appliances and connecting to said network, receiving said second device ID from said second electronic appliance, and transmitting to said authentication apparatus (i) a communication means ID that specifies a communication means that is communicating with said second electronic appliance and (ii) said received second device ID.

8. A communication system in accordance with Claim 7,

wherein the group information provided in said authentication apparatus further controls said second electronic appliances by associating each of said second device IDs of the second electronic appliances with said communication means ID.

9. A communication apparatus for controlling communication between a plurality of electronic appliances, each electronic appliance being connected to a network, being provided with a unique device ID for identifying the electronic appliance, and being capable of transmission,

the communication apparatus comprising:

communication means for communicating with another apparatus via said network;

storage means for storing group information in which the plurality of electronic appliances, which are permitted to perform communication between themselves after the communication is authenticated, are registered as a group.

judgement means for judging, based on device IDs transmitted via the network before communication commences between said plurality of electronic appliances and the group information stored in said storage means, whether the communication is permitted; and

a control means for having said communication means transmit a result of said judgement by the judgement means to an exchange apparatus that is connected to said network and performs exchange process for communication between electronic appliances based on the transmitted device IDs.

10. A communication apparatus in accordance with Claim 9,
wherein wireless communication is performed between said electronic appliances and the exchange apparatus.

11. A communication apparatus in accordance with Claim 10,
wherein said electronic appliances are navigation apparatuses.

12. A communication apparatus in accordance with Claim 10,
wherein said electronic appliances are mobile telephones.

13. A communication apparatus in accordance with Claim 9,
wherein each of said electronic appliances is connected to a specified communication means in said exchange apparatus, and
when performing communication, each of said electronic appliances transmits said device ID to said communication apparatus, said exchange apparatus transmits a communication means ID for specifying said communication means to said communication apparatus,

said communication apparatus authenticates said electronic appliance based on said group information, by referring to a combination of said transmitted device ID and said transmitted communication means ID.

14. A communication apparatus in accordance with Claim 11,
wherein the group information is generated when an electronic appliance performs communication with the communication apparatus via the network.

15. A communication apparatus in accordance with Claim 9,
wherein the group information also includes content data that can be used by electronic appliances which are registered in the group information.

16. A communication apparatus in accordance with Claim 15,
wherein the content data is geographical data.